

REMARKS

Claims 1-20 are presented for examination. Claims 1, 4-11, 16, and 19 have been amended.

Rejections under 35 U.S.C. §102(e)

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Davis, U.S. Patent 6,498,806. Applicants respectfully traverse these rejections.

To anticipate a claim, the reference must teach every element of the claim. *See* MPEP §2131. Claim 1 has been amended to recite that the second interface is adapted to couple to a network node via a first master communication loop and a second shared communications loop. Davis does not teach this limitation. Further, the Examiner has stated that the digital interface 200 of Davis is “inherently part of the shared ADSL modem 210.” Applicants respectfully disagree. The digital interface 200 is not an “inherent” part of the shared ADSL modem 210. “To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skills. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745. *See* M.P.E.P. § 2163.07(a). According to Davis, the digital interface 200 “is not dependent on whether the modem supports multiple clients. The digital interface may be a high-speed parallel bus which supports Direct Memory Access (DMA) or Bust Master data transfers, such as PCI bus.” (*See* col. 9, lines 6-10). Thus, the digital interface 200 cannot be an “inherent” part of the shared ADSL modem 210. Accordingly, claim 1 is patentably distinguishable from Davis.

Claims 2 and 3 depend from claim 1 and are patentably distinguishable from Davis for at least the same reasons as claim 1, which has been distinguished from Davis for failing to teach that the second interface is adapted to couple to a network node via a first master communication loop and a second shared communications loop.

Claim 4 has been amended to recite that the first communications terminal exchanges communication information over both the first master communication loop and second shared communication loop via said second interface. Davis does not teach this limitation. Further, contrary to the Examiner's assertion, each workstation 216 of Davis exchanges communication information only through the corresponding local loop 218 and does not share loops of other workstations for communication. Accordingly, claim 4 is patentably distinguishable from Davis.

As to claim 5, Davis does not teach that a first communications terminal is adapted to exchange communication information over a second shared communication loop while the second communication terminal exchanges communication information over the second shared communication loop. In contrast, according to Davis, each workstation 216 "use individual ADSL modems 214 to connect to individual analog front ends 212 of a shared ADSL server modem 210 via individual twisted pair local loops 218." (See col. 7, lines 59-63, emphasis added). Thus, the workstations 216 do not exchange communication information over shared communication loops. Accordingly, claim 5 is patentably distinguishable from Davis.

Claim 6 has been amended to recite that the transceiver is adapted to simultaneously communicate information over both the first master communication loop and the second shared communication loop with a remote communication device located at a central office (CO). Davis does not teach this limitation. According to Davis, the server ADSL modem 210 is located at the central office. Accordingly, claim 6 is patentably distinguishable from Davis.

Claim 7 depends from claim 1 and is patentably distinguishable from Davis for at least the same reasons as claim 1, which has been distinguished from Davis for failing to teach that the second interface is adapted to couple to a network node via a first master communication loop and a second shared communications loop.

As to claim 8, Davis does not teach that the transceiver is adapted to share the second shared communications loop for receiving downstream communication information for the first communication terminal. Contrary to the Examiner's assertion, PC 29 of Davis does not receive

shared downstream signal via shared loops. As shown in figure 3 of Davis, each PC 29 is connected to a corresponding line interface 38 via individual communication loop. The PC 29 does not share a second communication loop for receiving downstream data from the network connection. Instead, each PC 29 receives a shared downstream signal on its own individual loop and “[a] receiver in each client PC modem examines a destination code within a carrier frequency band or bands during each symbol interval and processes data in other frequency band 44 only if the destination code matches a pre-assigned destination code.” (See col. 6, lines 47-51). Thus, Davis does not teach that each PC 29 is adapted to share the second communications loop for receiving downstream communication information. Accordingly, claim 8 is patentably distinguishable from Davis.

Claim 9 has been amended to recite that the transceiver is adapted to share the second shared communications loop for both upstream and downstream communication information for the first communication terminal. Davis does not teach this limitation. According to Davis, the shared ADSL modem 210 uses individual local loops 218 corresponding to each workstation 216 (see figure 6). Thus, Davis does not teach that the transceiver is adapted to share a second shared communications loop for both upstream and downstream communication information for the first communication terminal. Accordingly, claim 9 is patentably distinguishable from Davis.

Claims 10 and 11 depend from claim 1 and are patentably distinguishable from Davis for at least the same reasons as claim 1, which has been distinguished from Davis for failing to teach that the second interface is adapted to couple to a network node via a first master communication loop and a second shared communications loop.

Claim 12-14 and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Counterman, U.S. Patent 6,310,894. Applicants respectfully traverse these rejections.

As to claim 12, Counterman does not teach a network node coupled to a first modem via a master communication loop and to a second modem via a shared communication loop, wherein said first modem is also coupled to said network node via the shared communication loop, as recited in claim 12. “A claim is anticipated only if each and every element as set forth in the

claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). *See also* M.P.E.P. § 2131. Counterman is directed to “simultaneous delivery of different services to physically separated subscribers over a shared single pair of wires” (see col. 3, lines 50-53, emphasis added). In Counterman, each customer premise (140, 142) is connected to a single metallic pair 112 and shares the total bandwidth of the metallic pair 112 with other customer premises. According to Counterman, different types of services (narrowband and broadband) are multiplexed over the same metallic pair 112 and each customer premise taps into the metallic pair 112 to filter out the desired service. The customer premises 140 and 142 are not connected to the central office 104 via individual loops as recited in claim 12.

Further, the Examiner has stated that “[a]t customer premise 1 140, even though the figure does not show a first modem, however, an ADSL modem could be inherently installed there to serve a first communications terminal (e.g. a PC).” (Emphasis added). Applicants respectfully disagree. In Counterman, the customer premise 140 is configured as a narrowband destination (e.g., POTS) and the customer premise 142 is configured as a broadband destination (e.g., ADSL). The service filter 148 separates narrowband services for the customer premise 140 and the service filter 150 separates broadband services for the customer premise 142. According to Counterman, “[s]ervice filter 148 prevents the broadband signal from interfering with the signal and equipment at customer premises 140.” (Col. 4, lines 18-23). Thus, contrary to the Examiner’s assertion, a broadband ADSL modem cannot function in the narrowband customer premise 140 and an ADSL modem cannot be inherently installed at the customer premise 140. Accordingly, claim 12 is patentably distinguishable from Counterman.

Regarding claim 13, as stated above, an ADSL modem cannot be inherently installed in the customer premise 1 140, which is configured for narrowband services by the service filter 148. Accordingly, claim 13 is patentably distinguishable from Counterman.

Regarding claim 14, the Examiner has stated that “the first terminal at customer premise 1 is inherently adapted to exchange communications information simultaneously over both first loop (through drop cable 1 to the common metallic pair 112) and second loop, which is through the portion of the common metallic pair 102.” Applicants would like to respectfully point to the

Examiner that the reference number 102 in figure 4 does not refer to a metallic pair. The reference number 102 refers to a bundle of metallic pairs including the metallic pair 112. According to Counterman, "[a]t the network side of the line, narrowband and broadband services via line card 120 and ADSL modem 122, respectively, are coupled onto a wire pair (112) within bundle 102." (Col. 3, lines 53-56, emphasis added).

Further according to Counterman, "[a]t the customer side, drop cable 144 and 146 are connected between wire pair 112 and the customer premises 140 and 142, respectively." (Col. 4, lines 8-11). The customer premise 1 is connected to the central office 104 via a single loop using the metallic pair 112. Similarly, the customer premise 2 is also connected to the central office 104 via the same loop using the metallic pair 112. Thus, Counterman uses a single loop via the metallic pair 112 to connect both the customer premises 1 and 2 with the central office 104. In contrast, claim 14 recites that the first modem is adapted to communicate information simultaneously over both the master communication loop and the shared communication loop as an integrated communication having a higher bandwidth than that available over the master communication loop. Accordingly, claim 14 is patentably distinguishable from Counterman.

Regarding claims 16-18, as explained above, Counterman does not teach a shared communication loop with a master communication loop for communicating information with the modem. Thus, claims 16-18 are patentably distinguishable from Counterman.

Claim 19 has been rejected using similar rejection argument of claim 12. Accordingly, claim 19 is patentably distinguishable from Counterman for at least the same reasons as claim 12, which as been distinguished from Counterman for failing to teach a master communication loop and a shared communication loop for communicating information between a first communication terminal and a network node.

Claim 20 depends from claim 19 and is patentably distinguishable from Counterman for at least the same reasons as claim 19.

Rejections under 35 U.S.C. §103(a)

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Counterman U.S. Patent 6,310,894. Applicants respectfully traverse this rejection.

Claim 15 depends from claim 12, which as been distinguished from Counterman for failing to teach a master communication loop and a shared communication loop for communicating information between a first communication terminal and a network node. Accordingly, claim 15 is patentably distinguishable from Counterman for at least the same reasons as claim 12.

Further, in view of Counterman, the Examiner has stated that "both ADSL modem and a telephone are always utilized at the customer premise." Applicants respectfully disagree. Counterman is directed towards providing "different services to physically separated subscribers, i.e., a portion of a common line carries one service to one location and a second service to another location." (See col. 2, lines 56-59). In counterman, each customer premise 140 and 142 receives a predetermined service from the central office 104 via service filters 148 and 150. The customer premise 140 receives narrowband services and the customer premise 142 receives broadband service. "Service filter 148 prevents the broadband signal from interfering with the signal and equipment at customer premises 140." (See col. 4, lines 18-23). Thus, the customer premise 140 is configured for narrowband service and contrary to the Examiner's assertion, a broadband ADSL modem cannot function in the narrowband customer premise 140. Accordingly, claim 15 is further patentably distinguishable from Counterman.

Rejections under 35 U.S.C. §112, Second Paragraph

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 has been amended to remove informalities. Applicants respectfully request the withdrawal of the rejection of claim 19 under 35 U.S.C. 112, second paragraph.

Rejections under 35 U.S.C. §101

Claim 19 is rejected under 35 U.S.C. 101 as being an improper claim.

Claim 19 has been amended to remove informalities. Applicants respectfully request the withdrawal of the rejection of claim 19 under 35 U.S.C. 101.

Claim Objections

Claims 16-17 are objected to under 37 CFR 1.75(c) as being in improper form.

Claims 16-17 have been amended to remove the informalities.

Applicant believes this application and the claims herein to be in a condition for allowance. Should the Examiner have further inquiry concerning these matters, the Examiner is requested to contact the below named attorney for Applicants.

Respectfully submitted,



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